Rail Two-Piece Folding Platform (RF) Flipper Torsion Spring and Hinge Instructions

These instructions will aid you in replacing the flipper torsion spring(s) and/or hinge parts on an RF 55-12 (35+20+12) Railgate.

Getting Started

1. **Confirm** that you have the correct parts for the repair (Figure 1-4 and Table 1-4).

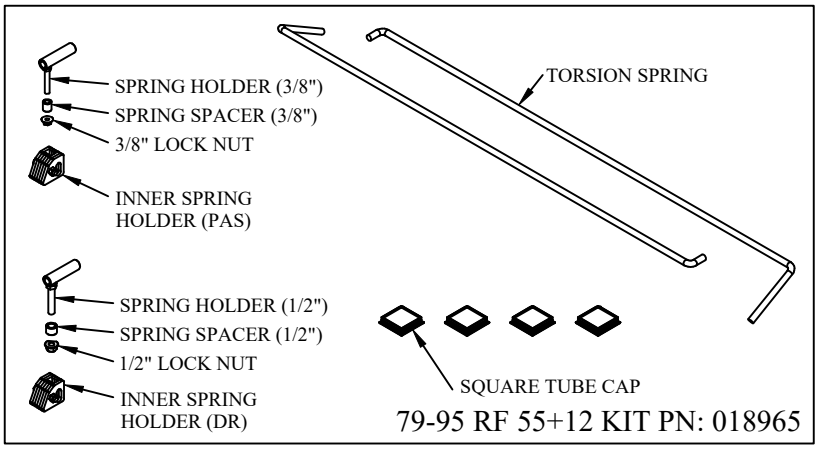


Figure 1: Part identification.

Table 1: Parts list for 018965.

QTY.	PART NO.	DESCRIPTION
2	018843	TORSION SPRING
1	018923	TORSION SPRING HOLDER (3/8")
1	018922	TORSION SPRING HOLDER (1/2")
1	018836	TORSION SPRING SPACER (3/8")
1	018835	TORSION SPRING SPACER (1/2")
1	000553	3/8" LARGE FLANGE LOCK NUT
1	018994	1/2" FLANGE LOCK NUT
4	018871	SQUARE TUBE CAP
1	018842	INNER TORSION SPRING HOLDER (PASSENGER SIDE)
1	018913	INNER TORSION SPRING HOLDER (DRIVER SIDE)

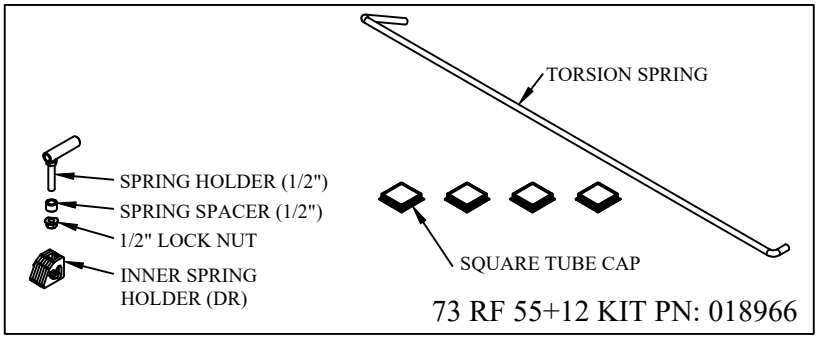


Figure 2: Part identification.

Table 2: Parts list for 018966.

QTY.	PART NO.	DESCRIPTION
1	018843	TORSION SPRING
1	018922	TORSION SPRING HOLDER (1/2")
1	018835	TORSION SPRING SPACER (1/2")
1	018994	1/2" FLANGE LOCK NUT
4	018871	SQUARE TUBE CAP
1	018913	INNER TORSION SPRING HOLDER (DRIVER SIDE)

Getting Started (continued)

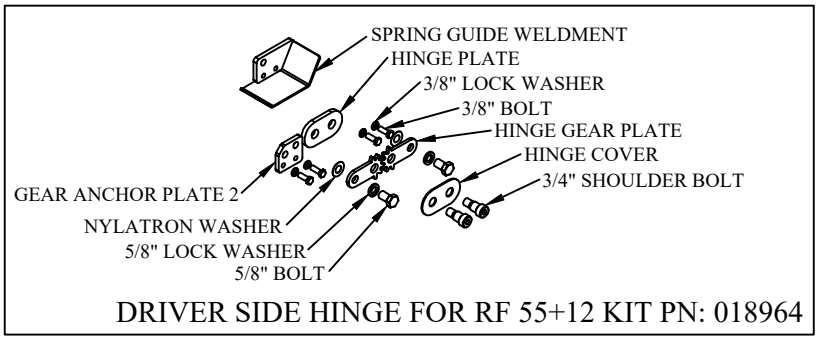


Figure 3: Part identification.

Table 3: Parts list for 018964.

QTY.	PART NO.	DESCRIPTION
1	002597	HINGE PLATE
1	018874	GEAR ANCHOR PLATE 2
4	000509	3/8" BOLT
4	000572	3/8 LOCK WASHER
2	006375	HINGE GEAR PLATE
2	002934	5/8" BOLT
2	000768	5/8" LOCK WASHER
1	003051	HINGE COVER
2	002933	3/4" SHOULDER BOLT
2	007633	NYLATRON WASHER
1	018875	SPRING GUIDE WELDMENT

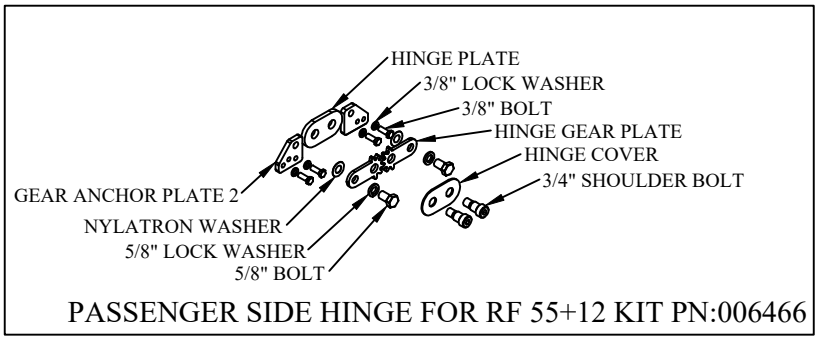


Figure 4: Part identification.

Table 4: Parts list for 006466.

QTY.	PART NO.	DESCRIPTION
1	002597	HINGE PLATE
2	003052	GEAR ANCHOR PLATE
4	000509	3/8" BOLT
4	000572	3/8 LOCK WASHER
2	006375	HINGE GEAR PLATE
2	002934	5/8" BOLT
2	000768	5/8" LOCK WASHER
1	003051	HINGE COVER
2	002933	3/4" SHOULDER BOLT
2	007633	NYLATRON WASHER

Removing the Existing Flipper Torsion Spring (Driver Side)

1. **Position** the platform in the open position, with the flipper folded.
2. **Lower** the platform until it is at a comfortable working height.
3. **Disconnect** the positive terminal from the battery or
   Manually Trip the circuit breaker.
4. **Remove** the square plugs from the bottom of the platform.
5. **Position** and **Hold** the flipper in the vertical position (Figure 5).
6. **Rotate** and **Secure** the flipper so that the spring holder is not under pressure from the spring, as needed.
7. **Remove** the nut, from inside the platform, accessible through
   the square hole in the bottom of the platform.
8. **Position** a 3/8" diameter x 75" long rod into the 1/2" hole on the passenger side (Figure 5).
   This rod will be used to assist removal of the torsion spring in the next steps, if needed.
9. **Gently** Pull the torsion spring and holder while having another person
   Push on the 3/8" rod until the inner torsion spring holder is aligned with the square hole.
10. **Rotate** the spring counter-clockwise to
    Remove the inner torsion spring holder out of the square hole.
11. **Remove** the torsion spring from the platform.

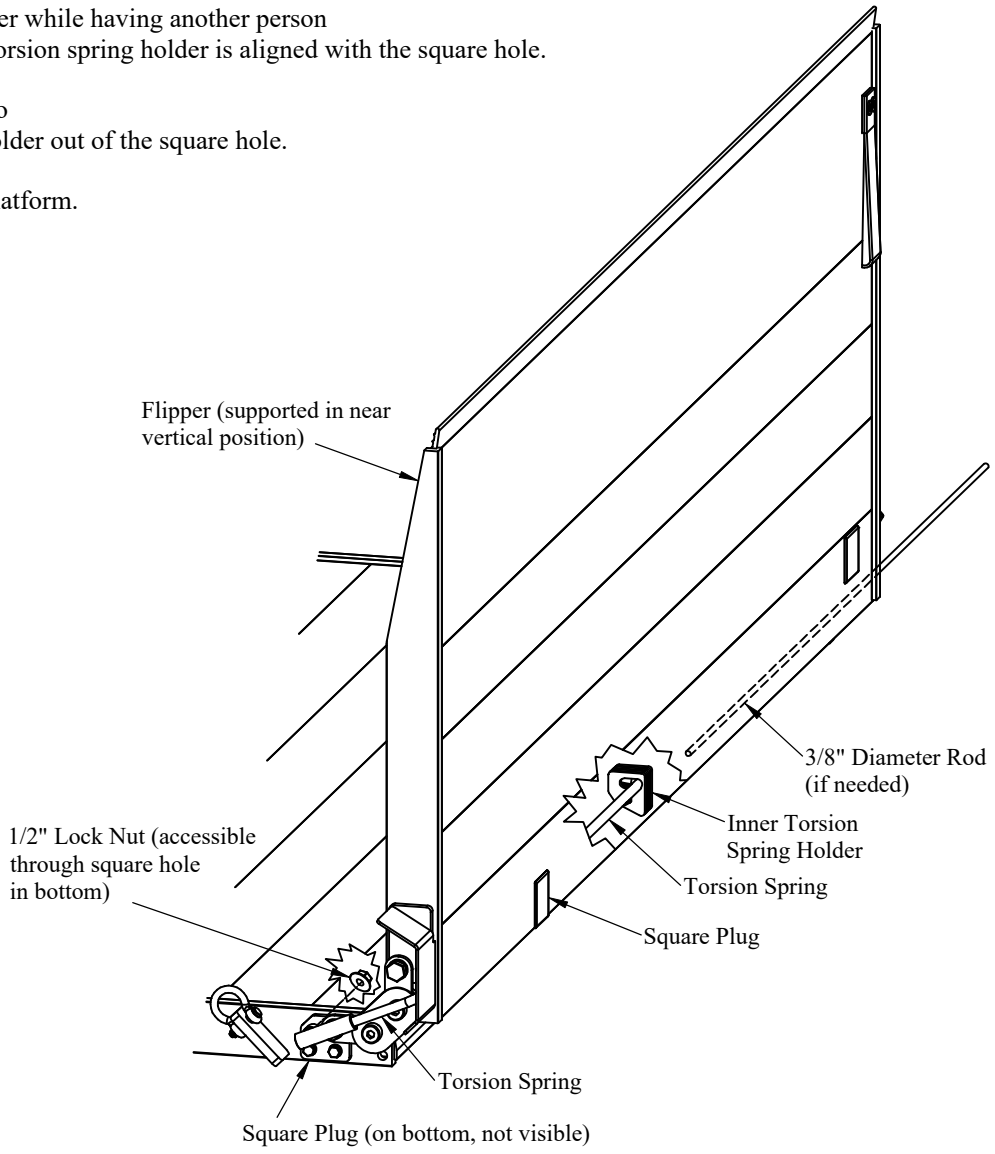


Figure 5: Platform flipper torsion spring hardware (driver side).

Removing the Existing Flipper Torsion Spring (Passenger Side)

1. **Remove** the square plugs from the bottom of the platform (Figure 6).

2. **Rotate** and **Secure** the flipper so that the spring holder is not under pressure from the spring, as needed.

3. **Remove** the nut, from inside the platform, accessible through the square hole in the bottom of the platform.

4. **Position** a 3/8" diameter x 75" long rod into the 1/2" hole on the driver side.
   This rod will be used to assist removal of the torsion spring in the next steps, if needed.

5. **Gently Pull** the torsion spring and holder while having another person **Push** on the 3/8" rod until the inner torsion spring holder is aligned with the square hole.

6. **Rotate** the spring counter-clockwise to **Remove** the inner torsion spring holder out of the square hole.

7. **Remove** the torsion spring from the platform.

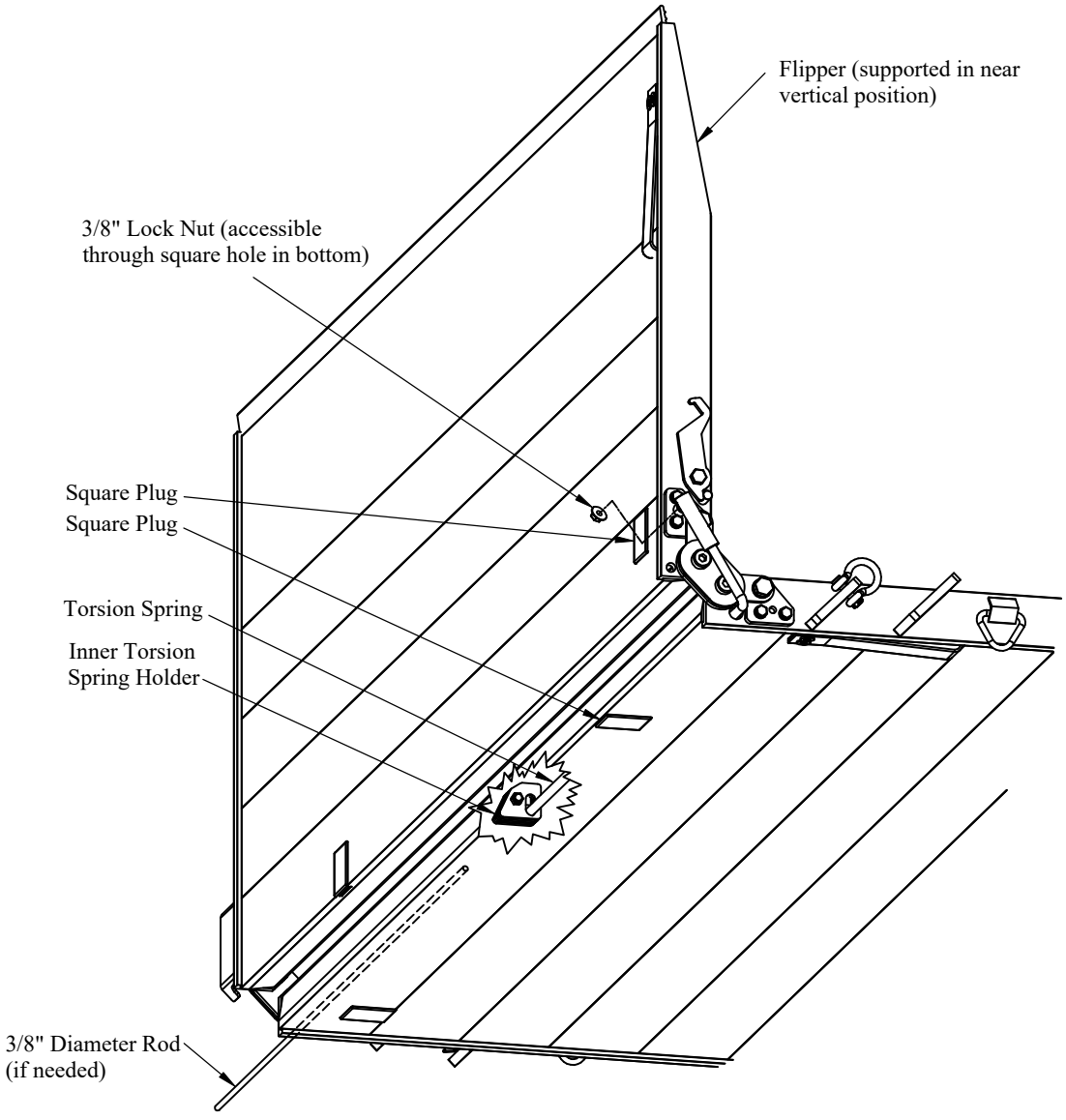


Figure 6: Platform hardware (passenger side).

Installing the Hinge Hardware

Note: Skip this section if not replacing the hinge hardware.

1. **Open** and **Unfold** the platform.

2. **Lower** the platform onto saw horses or similar working surface.
   Be sure that the working surface supports both the flipper and the main platform.

3. **Disconnect** the positive terminal from the battery or
   Manually Trip the circuit breaker.

4. **Remove** all hinge hardware and plates from the side that is to be repaired (Figure 7 and Figure 8).
Note: If not replacing, the latch Does Not need to be removed.

5. **Install** the new hardware on the platform (Figure 7 and Figure 8).
   Use red LockTite® thread locker on bolts that do not have a lock washer.

6. **Lubricate** the hinges with light weight oil.

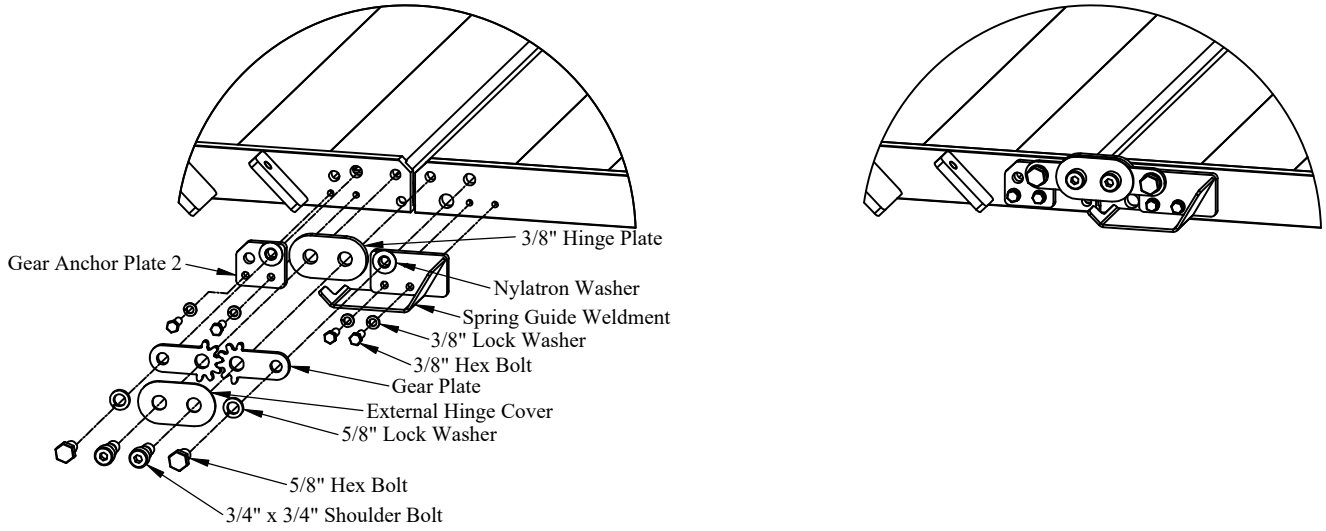


Figure 7: Platform RFold hinge hardware (driver side).

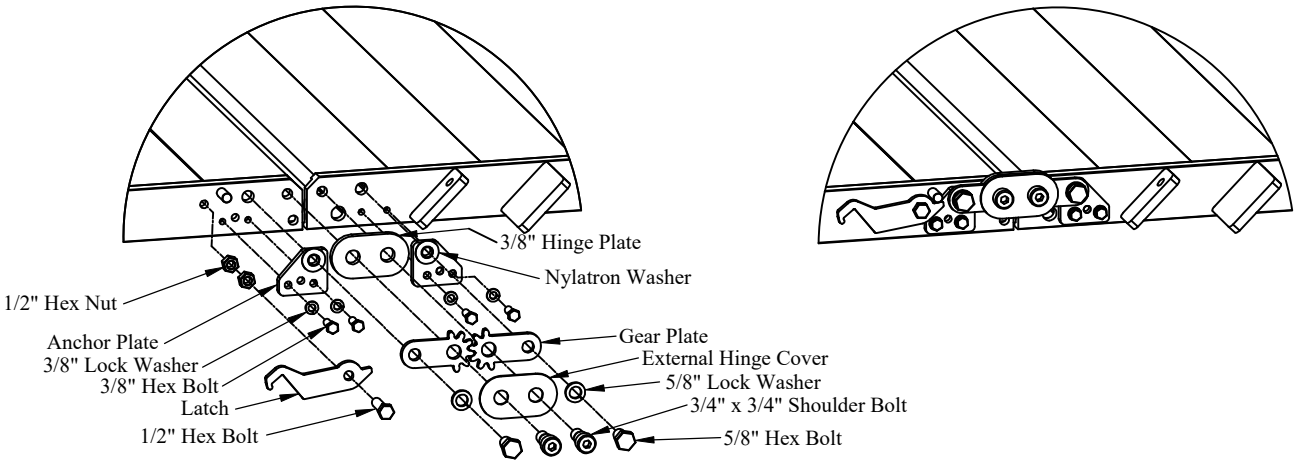


Figure 8: Platform RFold hinge hardware (passenger side).

Installing the Flipper Torsion Spring (Driver Side)

1. **Insert** the torsion spring into the platform (Figure 9).
2. **Position** the torsion spring so that short bend extends out of the square hole (Figure 9).
3. **Position** the internal torsion spring holder onto the torsion spring in orientation shown (Figure 9).
   Be sure to use the driver side internal torsion spring holder, it has the single end plate towards the spring.
4. **Rotate** the torsion spring to make the torsion spring holder fit into the square hole (Figure 9).
5. **Push** the torsion spring partially into the platform.
6. **Lubricate** the torsion spring with a thin coat of grease.
7. **Position** the torsion spring holder and 1/2" spacer onto the torsion spring (Figure 10).
8. **Align** the bolt of the torsion spring holder with the hole in the platform (Figure 10).
9. **Push** the torsion spring the rest of the way into the platform.
10. **Install** the 1/2" flange lock nut on the torsion spring holder, on the inside of the platform (Figure 10).
    This can be done through the square hole in the bottom of the platform.
    Do not tighten at this time.
11. **Tighten** the 1/2" flange lock nut until is almost fully tight.
    Make sure the torsion spring holder can still rotate freely without binding or being loose.

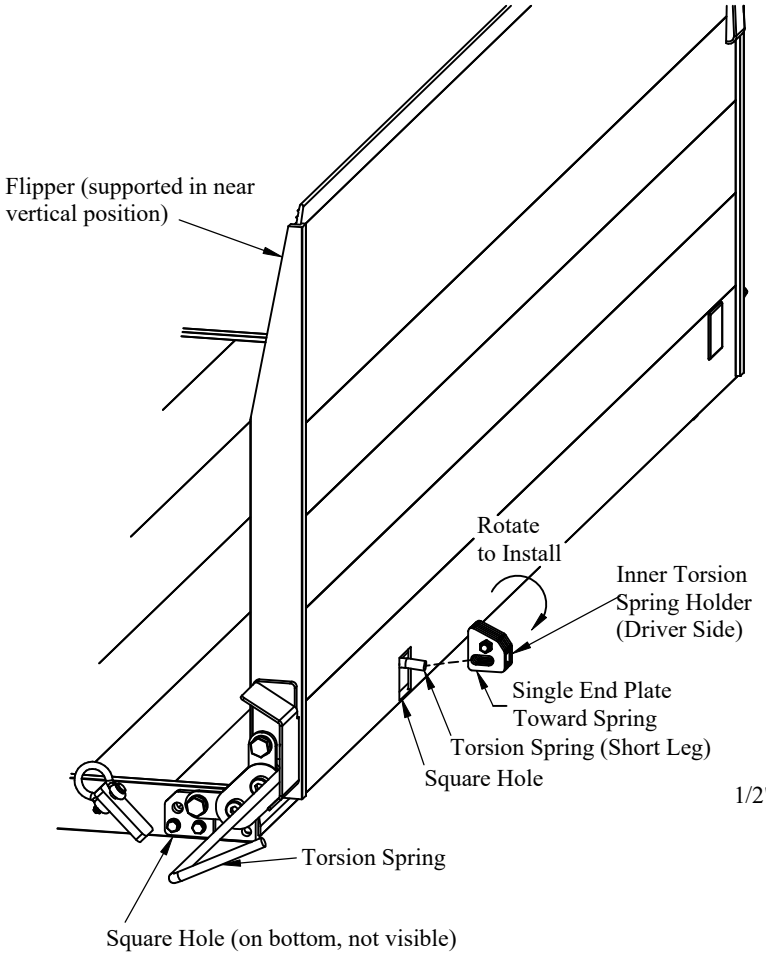


Figure 9: Platform flipper inner torsion spring holder (driver side).

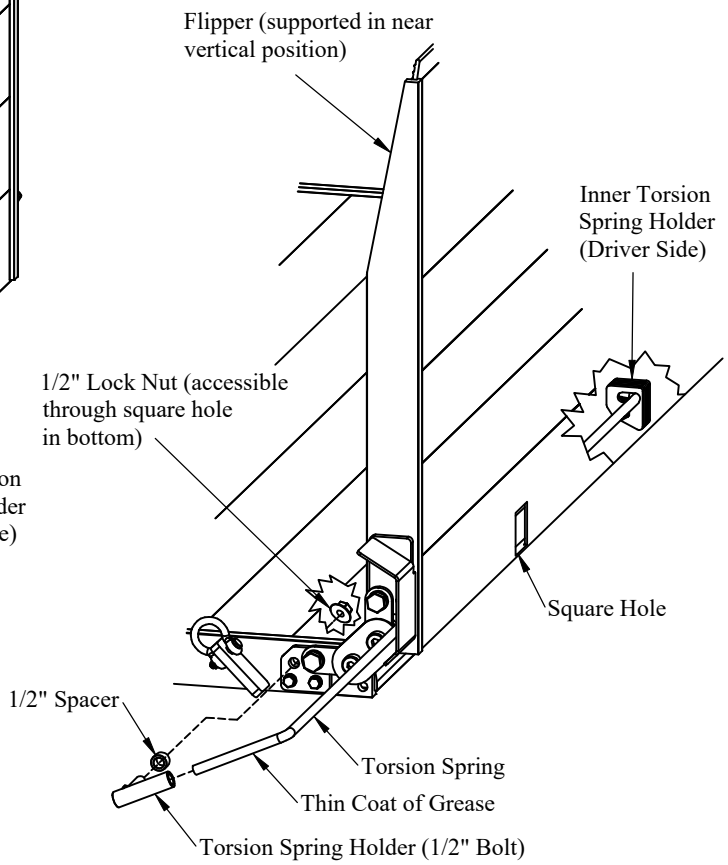


Figure 10: Platform flipper torsion spring hardware (driver side).

Installing the Flipper Torsion Spring (Passenger Side)

1. **Position** the platform in the folded position and vertical position (Figure 11).
2. **Insert** the torsion spring into the platform (Figure 11).
3. **Position** the torsion spring so that short bend extends out of the square hole (Figure 11).
4. **Position** the internal torsion spring holder onto the torsion spring in orientation shown (Figure 11).
   Be sure to use the passenger side internal torsion spring holder, it has the single end plate towards the spring.
5. **Rotate** the torsion spring to make the torsion spring holder fit into the square hole (Figure 11).

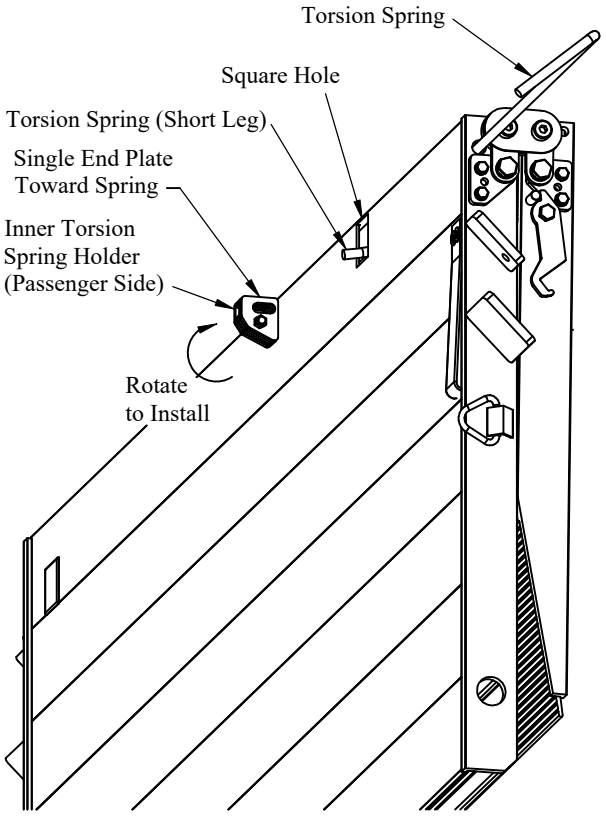


Figure 11: Platform flipper inner torsion spring holder (passenger side).

Installing the Flipper Torsion Spring (Passenger Side)

6. **Push** the torsion spring partially into the platform (Figure 12).
7. **Position** the platform in the open position, with the flipper folded.
8. **Position** and **Hold** the flipper in the vertical position (Figure 12).
9. **Rotate** and **Secure** the flipper so that the spring holder is not under pressure from the spring, as needed.
10. **Lubricate** the torsion spring with a thin coat of grease.
11. **Position** the torsion spring holder and 3/8" spacer onto the torsion spring (Figure 12).
12. **Align** the bolt of the torsion spring holder with the hole in the platform (Figure 12).
13. **Push** the torsion spring the rest of the way into the platform.
14. **Install** the 3/8" flange lock nut on the torsion spring holder, on the inside of the platform (Figure 12).
    This can be done through the square hole in the bottom of the platform.
    Do not tighten at this time.
15. **Tighten** the 3/8" flange lock nut until is almost fully tight.
    Make sure the torsion spring holder can still rotate freely without binding or being loose.
16. **Reconnect** power to the liftgate.
17. **Close** and **Store** the platform.

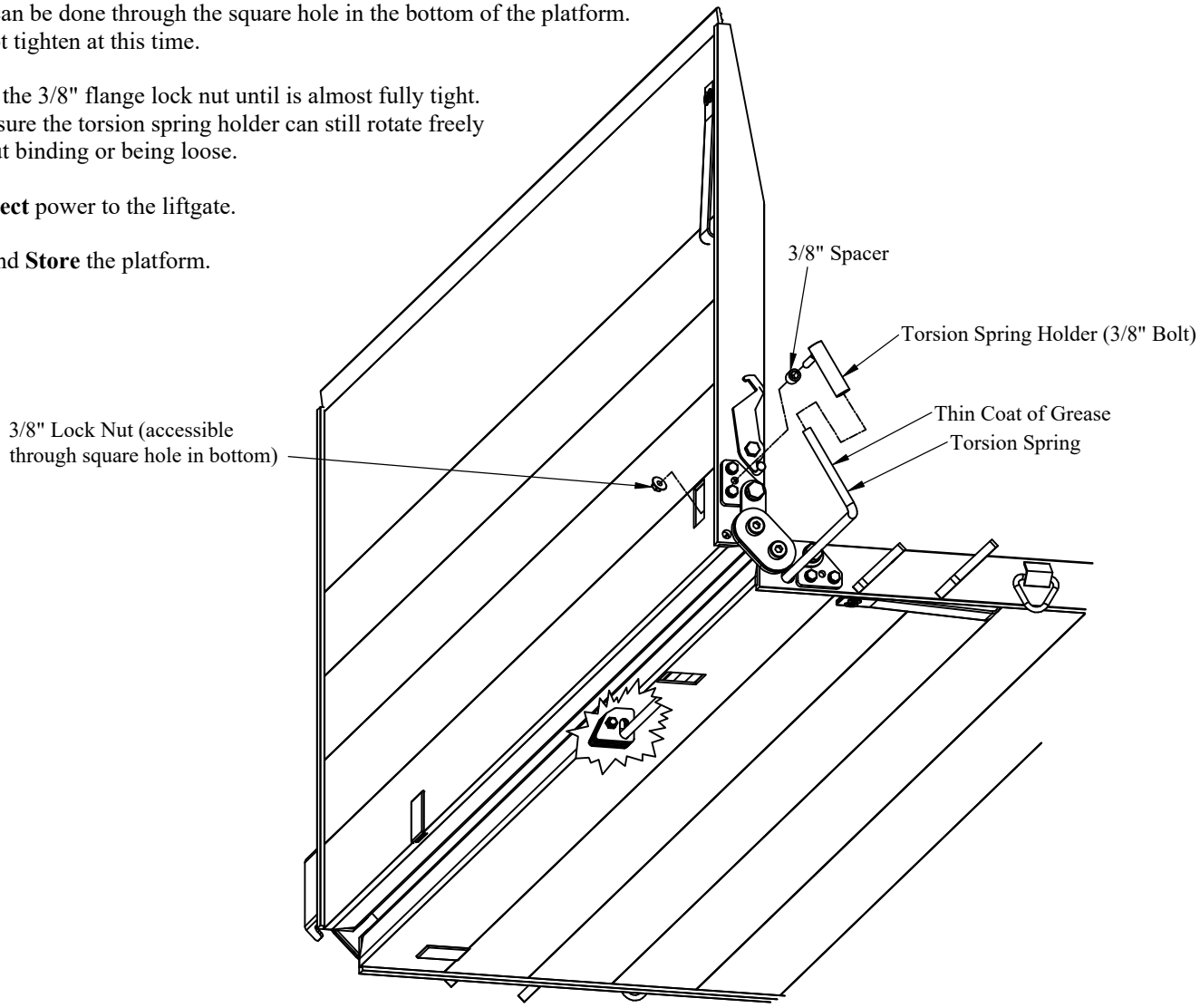


Figure 12: Platform flipper inner torsion spring holder (passenger side).